

Applicant(s) : Kou-Joan Cheng, et al.
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Attorney Docket No.: 70002-074001
Client Ref. No.: 14A-900803

REMARKS

The present document is submitted in response to the Office Action dated September 11, 2007 (“Office Action”).

Applicants have amended claim 1, support for which appears at various places in the specification, e.g., at page 1, lines 14-15. Applicants have also added new claims 27-31. Support for new claims 27 and 28 can be found in the specification at page 2, lines 1-3; support for new claims 29 appears at page 2, lines 8-9; and support for new claims 30 and 31 is shown in original claims 6 and 10, respectively. Finally, Applicants have amended withdrawn claim 11 such that it includes all of the limitations of amended claim 1. This amendment has necessitated cancellation of withdrawn claims 12, 17, and 23, and dependency changes to withdrawn claims 13, 18, and 24. No new matter has been introduced.

Upon entry of the present amendments, claims 1, 3-6, 8-11, 13-16, 18-22, and 24-31 will be pending. Among them, claims 1, 3-6, 8-10, and 27-31 will be examined and claims 11, 13-16, 18-22, and 24-26 have been withdrawn.

Applicants respectfully request that the Examiner reconsider this application in view of the following remarks.

Rejections under 35 U.S.C. § 103

Claims 1, 3-6, and 8-10 are rejected as obvious over one primary reference, Cole, US Patent 4,320,151 (“Cole”), in view of four secondary references, Boinot et al., US Patent 2,529,131 (“Boinot”); Bass, US Patent 3,983,255 (“Bass”); Heikkila et al., US Patent 5,730,877 (“Heikkila”); and De Sa et al., US Patent 4,337,123 (“De Sa”). See the Office Action, page 2, last paragraph.

Independent claim 1, as amended, will be discussed first. This claim covers a composition containing a thermolabile protein and a **dried** liquor waste.

Cole, the primary reference, teaches a method of protecting a fungal alpha amylase against thermal denaturation by mixing the amylase with a sugar-containing **solution** (aqueous). See Abstract. This reference further discloses the minimum required sugar concentration for preserving the activity of the amylase in a **solution**. See, e.g.,

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column 8, lines 37-40. Clearly, Cole is concerned with using an aqueous sugar-containing **solution** to achieve thermal protective effect of an enzyme; it does not suggest using a **dried liquor waste** as required by claim 1.¹

As correctly pointed out by the Examiner, Boinot discloses presence of sugar in vinasse, a liquor waste; Bass teaches concentrating vinasse and drying the concentrate; De Sa discloses the problems associated with disposal of vinasse; and Heikkila discloses fractionating vinasse to obtain a sucrose-rich fraction. See the Office Action, page 3, 3rd-6th paragraphs. Accordingly, none of these four secondary references suggests use of a dried liquor waste to protect an enzyme from thermal denaturation. In other words, all of them do not cure the deficiency of Cole.

In view of the above remarks, Applicants submit that Cole, Boinot, Bass, Heikkila, and De Sa, taken alone or in combination, do not render claim 1 obvious. Nor do they render obvious claims 3-6 and 8-10, all dependent from claim 1.

New Claims

New claims 27-31 depend, either directly or indirectly, from claim 1. For the same reasons set forth above, these new claims are also nonobvious over the five cited references.

Withdrawn Claims

Applicants have amended claim 11, the only independent claim withdrawn from consideration, in a manner that it now includes all of the limitations of claim 1, the only independent claim currently being examined.

As the Examiner correctly pointed out in the Restriction Requirement, the claims withdrawn from consideration (process claims) would be entitled to rejoinder upon

¹ As pointed out in the specification, the major composition of a liquor waste includes crude starch (10-13%), crude proteins (14-22%), crude lipids (4-7%), crude fibers (17-21%), lipids (20%), and ash (4-46%).” See page 3, lines 4-6. Many of these substances, e.g., crude fibers, lipids, and ash, have poor water-solubility. Thus, a liquor waste, containing high contents of the low-water-soluble substances, is also poorly water soluble. It follows that Cole, which teaches preserving enzymatic activity in an aqueous sugar-containing solution, certainly does not suggest using a dried liquor waste, which is poorly soluble in water.

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allowance of the claims being examined (product claims), as long as the withdrawn claims include all of the limitations of the allowable claims. See page 3, 4th paragraph.

Applicants thus respectfully request that the Example rejoin and allow withdrawn claims 11, 13-16, 18-22, and 24-26 upon allowance of claims currently under examination.

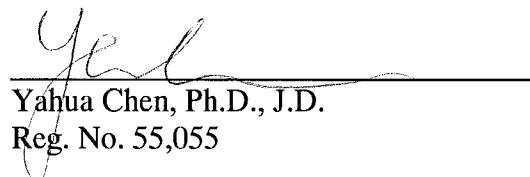
CONCLUSION

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

The Petition for Extension of Time fee in the amount of \$ 120 is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other charges to Deposit Account No. 50-4189, referencing Attorney Docket No. 70002-074001.

Respectfully submitted,

Date: 1/9/08



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